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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/902,256  | 07/11/2001  | Hisashi Ichimura     | 2001-0969           | 8989             |
| 513   | 7590        | 10/05/2004           | EXAMINER            |                  |
| WENDEROTH, LIND & PONACK, L.L.P.<br>2033 K STREET N. W.<br>SUITE 800<br>WASHINGTON, DC 20006-1021 |             |                      | KUMAR, PREETI       |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 1751                |                  |

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                          |                  |
|------------------------------|--------------------------|------------------|
| <b>Office Action Summary</b> | Application No.          | Applicant(s)     |
|                              | 09/902,256               | ICHIMURA ET AL.  |
|                              | Examiner<br>Preeti Kumar | Art Unit<br>1751 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 27 July 2004.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 41-55 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 41-55 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

|  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)          |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/28/04</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Non-Final Rejection***

***Response to Amendment***

1. Claims 41-55 are pending. Claims 1-40 are cancelled.
2. Claims 41 and 55 are independent.
3. The rejection of claims 29-40 under 35 U.S.C. 103(a) as being unpatentable over Hojo et al. (US 5,824,113) in view of Thorsen (US 4,189,303) is withdrawn in light of applicant's cancellation of pending claims in the amendment dated 6/28/2004.

***Response to Arguments***

4. Applicant's arguments filed 6/28/2004 have been considered but are moot in view of the new ground(s) of rejection.

***New Grounds of Rejection***

***Claim Objections***

5. Claim 51 is objected to for minor informalities. Specifically Claim 51 is the duplicate of claim 49. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 41-55 are rejected under 35 U.S.C. 103(a) as being obvious Kondo et al. (US 4,533,359) in view of Thorsen (US 4,189,303).

Kondo et al. teach the production of descaled animal fiber wherein the scale is effectively removed by oxidation of a surface of the animal fiber with an oxidizing reagent, following by treatment with a proteolytic enzyme in the presence of salt. The resulting animal fiber has excellent shrink-proof properties. See abstract.

Specifically regarding claims 44, 48 and 55, Kondo et al. teach shrink-proof animal fibers such as vicuna, mohair, Angora, rabbit hair and Cashmere. See col.1, ln.37-42.

Specifically regarding claim 45, Kondo et al. teach oxidizing agents such as hypochlorites, chlorites, dichloroisocyanurates, permanganates, hydrogen peroxide, monopersulfuric acid and salts thereof are illustrative. Preferred oxidizing agents are dichloroisocyanurates and permanganates. See col.2, ln.10-15.

Specifically regarding claims 49-51, Kondo et al. teach reducing agents such as sodium metabisulfite, sodium bisulfite, sodium sulfite and the like. The amount of

reducing reagent employed is optionally from about 3 to 6 percent by weight of the animal fibers. See col.2,ln.43-46.

Regarding the oxidation and reduction process steps of the instant claims, specifically, a)oxidizing under acidic conditions, b)oxidizing with ozone and c)reductive cleavage, as recited by the instant claims, Kondo et al. teach oxidation carried out at pH 4 and further teach reducing treatment. See col.2,ln.15-50. and examples 1 and 2. Specifically, examples 1 and 2 illustrate Australian Merino wool dipped into an aqueous solution containing 2 moles/liter of ammonium sulfate and sodium alkyl sulfate, for 10 minutes at 20.degree. C., 2.5 percent by weight of potassium permanganate is added into the solution to react with the top for 10 minutes. The temperature is increased to 40.degree. C., and the reaction is continued until the permanganate ion color (deep violet) disappears, after which the dipped top is adequately rinsed with water. After the oxidizing step, Kondo et al. teach that the rinsed top is dipped into aqueous solution containing 6 percent by weight of acetic acid and 6 percent by weight of sodium bisulfite to be reduced at about 50.degree. C. for about half an hour. See col.3-4. Also, in examples 1 and 2 Kondo et al. measure the antipilling property according to JIS L-1076 and teach that the treated fibers have a pilling resistance of 4-5. See table 1, col.4.

However Kondo et al. do not specifically teach treatment by oxidation with ozone and the use of the pad steam method to arrive at the required animal fiber having a specific shrinkage rate and absorption band as recited by the instant claims.

Thorsen teaches a method for treating proteinaceous materials that contain disulfide or polysulfide bonds, such as wool, with ozone to impart shrinkproofing

properties. See abstract; col.1, ln.1-15. Thorsen illustrates the treatment of animal fibrous materials such as wool and mohair or blends of these fibers with any other type of fiber. These materials may be in any of various physical forms, e.g., bulk fibers, slivers, roving, top, yarns, felts, woven textiles, knitted textiles, or even garments or garment parts. See col.4, ln.1-10. In example 1-3, Thorsen illustrates proteinaceous fibers contacted with a steam-ozone mixture. Furthermore, Thorsen teach many benefits of treating dampened wool sliver with ozone such as, the process is simple and inexpensive because of the low cost of ozone and results in a wool material that is machine washable. See col.2, ln.30-60.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the oxidizer with the use of ozone/oxygen as an oxidizer as taught by Thorsen, in the animal fiber treatment method disclosed by Kondo et al., with a reasonable expectation of success and similar results because the teachings of Thorsen illustrate the benefit of treating wool with ozone/oxygen for excellent washability and shrinkage control of wool and further, Kondo et al. teach an oxidization decomposition process for the treatment of animal fiber.

Also, it would have been nonetheless obvious to one of ordinary skill in the art, at the time the invention was made, to arrive at the required animal fiber having a specific shrinkage rate and absorption band, since Kondo et al. in view of Thorsen teach a method of modifying analogous animal fibers which have pilling resistance values encompassed by the material limitation of the instant claims. The presumption is supported by the use of similar materials (i.e. animal fibers) and in the similar production

steps (i.e. oxidation and reduction) to produce the modified animal fiber having a pilling resistance greater than 3 as measured by an analogous test method JIS L-1076. The burden is upon the applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594.

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Remaining references cited but not relied upon are considered to be cumulative to or less pertinent than those relied upon or discussed above.
10. Applicant is reminded that any evidence to be presented in accordance with 37 CFR 1.131 or 1.132 should be submitted before final rejection in order to be considered timely.
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Preeti Kumar whose telephone number is 571-272-1320. The examiner can normally be reached on M-F 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

  
Mark Kope  
Primary Examiner

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Preeti Kumar  
Examiner  
Art Unit 1751

PK

  
Mark Kopec  
Primary Examiner